

**INITIAL STATEMENT OF REASONS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
DEPARTMENT OF WATER RESOURCES  
REGARDING THE AMENDMENT OF THE 2016 CALIFORNIA PLUMBING CODE (CPC),  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5**

**DWR 01/16**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

**STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS:**

**Problem Statement:** Section 13557 of the Water Code directed the Department of Water Resources (DWR) to develop regulations to establish a state version of Chapter 16 of the Uniform Plumbing Code (UPC) to provide design standards to safely plumb buildings with both potable and recycled water systems. DWR promulgated regulations in 2009 which were codified in Chapter 16A, Part II of the California Plumbing Code (CPC). Water Code Section 13557(b) directs DWR to periodically update these regulations as necessary.

Since these regulations were codified, several conditions have changed necessitating DWR amendments to the regulations: (i) The CPC has been reorganized moving recycled water subject matter to Chapter 15 of the CPC while stranding DWR's regulations in Chapter 16A, Part II, creating a confusing organizational structure in the CPC; (ii) AB 2282 was enacted granting authority to Department of Housing and Community Development (HCD) and California Building Standards Commission (CBSC) that overlaps and potentially conflicts with DWR's authority; and (iii) additional issues have been identified that should be addressed in the CPC, such as tying in relevant regulations in Titles 17 and 22 of the California Code of Regulations and distinguishing differences in standards for recycled water and other alternate water source systems.

**Harmonizing with AB 2282:** In 2014, AB 2282 was enacted instructing HCD and CBSC to research and adopt mandatory building standards for installation of recycled water supply systems for newly constructed single- and multi-family residential, commercial, and public buildings. AB 2282 did not expressly repeal or remove DWR's authority for recycled water building standards. Therefore, the statutory authority for recycled water building standards now appears to reside with CBSC for commercial and public buildings, with HCD for residential buildings, and with DWR for all of these building categories, as well as for industrial or other buildings.

DWR's proposed amendments will therefore address the need for organizational restructuring of the CPC for consistency, clarity and ease of use, as well as the need to harmonize new regulatory authority granted by AB 2282 with DWR's existing authority and to update certain regulatory sections to resolve issues that were not previously addressed when Chapter 16A, Part II was adopted.

**Benefits:** This DWR proposed code adoption will result in clearer organization and greater ease of use of the CPC and clarify the respective responsibilities of administrative agencies working with recycled water, as well as facilitate the safe installation of dual plumbed systems using both recycled and potable water supplies, as well as other alternative water supplies. Recycled water is the result of the treatment of municipal wastewater and its use could present a public health concern if it is not adequately treated, managed and properly used. There are state standards in Title 22 of the California Code of Regulations adopted by the State Water Resources Control Board (SWRCB) that establish the required treatment and allowed uses of recycled water. The CPC establishes the standards to safely plumb buildings and surrounding landscape where recycled water is used. It also establishes standards for testing and periodic inspection of systems to prevent cross-connections between recycled and potable water systems.

**Review of Code Advisory Committee:** The amendments proposed by DWR dated January 12, 2017, were submitted to the CBSC's GREEN-PEME Ad Hoc Code Advisory Committee (CAC) for review and were presented to the committee at its meeting on February 13, 2017. The public was also allowed to make comments to the committee in writing or at the meeting. Because of comments provided by the public and residual inconsistencies between amendments proposed by HCD and DWR, the committee recommended further study for multiple sections. After additional research and consultation with HCD and CBSC, DWR revised its proposed amendments to Sections

220.0, 601.2, 1501.2, 1502.3, 1503.1, 1503.4, 1503.11, 1503.12.1, 1503.12.4, 1503.13.2.4, 1503.14, 1504.4, and 1602.4. In addition, DWR withdrew its proposed amendments to Section 1503.15.2 (Maintenance Log). Another change was to substitute the defined phrase “recycled water supply system” for other variants throughout Chapter 15. The revisions are contained in DWR’s revised 45-Day Express Terms and explained below.

**Specific Purpose and Necessity of the Proposed Regulatory Actions:** DWR proposes to update and amend the 2016 California Plumbing Code. The proposed amendments are intended to provide clarity, specificity and direction to the code user and to implement and make specific existing state laws. The proposed amendments are a result of consultation with SWRCB, CBSC, and HCD, as well as consideration of comments received at public workshops and in writing during the pre-cycle period of the 2016 California Intervening Code Cycle prior to submittal to the CBSC. The rationale for each amendment by chapter and section is listed below. The amendments have been grouped into the following six items:

**1. DWR PROPOSES TO ADOPT THE FOLLOWING SECTIONS OF CHAPTER 2 OF THE CPC AS FOLLOWS:**

**CHAPTER 2  
DEFINITIONS**

**206.0 Disinfected Tertiary Recycled Water**

DWR proposes to adopt the definition of Disinfected Tertiary Recycled Water.

- The purpose is to define the term.
- This is necessary because the term is used in the "Reclaimed (recycled) water" definition.

Additionally, in Title 22's Water Recycling Criteria, "disinfected tertiary recycled water" is the minimum water quality required for flushing toilets and urinals, as well as other uses as established by the SWRCB. Note that California Water Code Section 13521 empowers the SWRCB to "establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health."

**220.0 Reclaimed (Recycled) Water (formerly 1614A.0)**

DWR proposes to relocate this Recycled Water definition from Section 1614A.0 of Chapter 16A.

- The purpose is to conform to the new reorganization of the CPC.
- This is necessary to improve the organization and usability of the CPC which currently has overlapping recycled water regulations in different chapters.

DWR proposes to correct the name of the responsible agency from the Department of Public Health (DPH) to the State Water Resources Control Board (SWRCB).

- The purpose is to communicate that certain recycled water responsibilities have shifted from DPH to SWRCB.
- This is necessary update the CPC to reflect past statutory changes.

Comments have been received questioning why this definition is restricted to tertiary recycled water. The reason is that "disinfected tertiary recycled water" is the class of water required for flushing toilets and urinals, as well as other uses addressed in the CPC.

**220.0 Recycled Water Supply System**

DWR proposes to add a definition of "Recycled Water Supply System". The definition is patterned after the 2015 Uniform Plumbing Code's "Water Supply System" definition for potable water. The purpose of this definition is to provide a term that encompasses the various system components collectively and defines the geographic scope that the recycled water standards cover.

- As a result of CAC review and consultation with HCD, DWR is providing further clarification of the intended applicability of the Plumbing Code in this Statement of Reasons. The Plumbing Code standards should apply to customer facilities, not the water supplier's infrastructure. Typically, the water supplier's responsibility is upstream of the discharge of the water meter and includes the construction, maintenance, and operation of the infrastructure to bring water to a customer's property. Plumbing Code standards would not apply to the supplier's infrastructure. The Plumbing Code provisions apply to the recycled water supply system from the point of connection with the water/wastewater utility's recycled water supply and the points of recycled water use at the fixtures or outlets in the building or on its premises. The point of connection is commonly the discharge side of the water service meter or the service shutoff valve where no meter is provided.
- The purpose is to capture all of the elements of a recycled water plumbing system in a common defined phrase.
- This is necessary because this phrase is used in parts of the CPC and it is important for clarity and ease of use of the CPC to have a clear definition.
- There is no intended change in regulatory effect.

## **2. DWR PROPOSES TO ADOPT THE FOLLOWING SECTIONS OF CHAPTER 6 OF THE CCP AS FOLLOWS:**

### **CHAPTER 6 WATER SUPPLY AND DISTRIBUTION**

#### **601.2 Hot and Cold Water Required**

DWR proposes to delete Exception 3 and replace it with two clarifying Exceptions and to renumber existing Exception 4 to Exception 5.

Exception 3: DWR proposes to add a new Exception 3 to Section 601.2 in Chapter 6. As a result of CAC review and consultation with HCD and CBSC, DWR made the following changes: the text would maintain the requirement for all residential buildings that potable water pipes be installed to fixtures even if an alternate water source, including recycled water, is available at the fixture. This applies to toilets and urinals that can be flushed with an alternate water source. This would allow potable water to be available for hygienic devices (bidets) to be added to toilets in residential occupancies. This provision would also allow occupants to easily select either potable water or alternate water to flush toilets and urinals. Stakeholders have expressed concern that recycled water purveyors expect some certainty in the customer base when making investments in recycled water infrastructure and would not want customers intended to use recycled water switching their toilets and urinals to potable water. This concern is addressed by: (i) Section 601.2, which allows the Authority Having Jurisdiction to waive the requirement for potable water to a fixture if potable water is not needed for safety or sanitation, such as when recycled water is available, and (ii) existing Exception 4 (to be renumbered as Exception 5), which allows a public agency to require recycled water for toilet and urinal use, thus waiving the requirement for potable water to toilets and urinals.

Following consultation with HCD and CBSC, DWR agreed to use HCD language so that Exception 3 applies to all residential buildings, including transient residential buildings such as hotels, instead of only to single family and multifamily residential buildings, as originally proposed.

- The purpose is to clarify standards for residential and non-residential occupancies.
- This is necessary because residential occupancies may install hygienic devices on the toilet that require potable water. Non-residential occupancies typically do not retrofit toilets with hygienic devices.
- There is no intended change in regulatory effect.

Exception 4: DWR proposes to add a new Exception 4 to Section 601.2 in Chapter 6. The text reflects that in non-residential occupancies the installation of potable water supply to fixtures served with an alternate water source would not be required but would be allowed. Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR revised Exception 4 to apply to all non-residential buildings instead of only commercial and public buildings as originally proposed.

- The purpose is to clarify standards for residential and non-residential occupancies.
- This is necessary to avoid unnecessary expense in installing potable water pipes to fixtures that will be served with alternate water. Non-residential occupancies typically do not retrofit toilets with hygienic devices, and recycled water purveyors have greater assurance of a recycled water customer base for the recycled water infrastructure.
- There is no intended change in regulatory effect.

Exception 5: DWR proposes to renumber existing Exception 4 to Exception 5.

- The purpose is to accommodate the addition of an Exception.
- This is necessary for proper syntax.
- There is no intended change in regulatory effect.

#### **601.3.3 (formerly 1617A.2) Alternate Water Sources**

DWR proposes to edit Section 601.3.3 to remove its applicability to recycled water supply systems because the subject will be addressed in Chapter 15, Section 1503.7.

- The purpose is to consolidate the recycled water provisions as much as possible and practical into Section 1503.
- This is necessary because recycled water regulations are more protective than other alternate water sources and separating these regulations from those governing other alternate water sources clarifies this distinction.
- There is no intended change in regulatory effect.

**3. DWR PROPOSES TO ADOPT THE FOLLOWING SECTIONS 1501 AND 1502 OF CHAPTER 15 OF THE CPC AS FOLLOWS:**

**CHAPTER 15  
§1501 and 1502  
ALTERNATIVE WATER SOURCES FOR NONPOTABLE APPLICATIONS**

**Intent**

DWR proposes to add the adjective “potable” to clarify that only potable water will be conserved.

DWR proposes to add the phrase: “, or by the use of alternate water sources where available” to account for the addition of alternative water supplies that are permitted to be used in buildings.

DWR proposes to delete the phrase: “for nonpotable uses for irrigation and/or indoor use” as redundant, because allowable uses are addressed in other sections.

- The purpose of the amendments is to clearly and accurately communicate the goals and intentions of the regulations: to conserve potable water and to recognize use of alternate water sources.
- This is necessary to inform the user, as well as to remove redundant information.
- There is no intended change in regulatory effect.

**1501.0 General**

The title is shown here for context. There is no text in this section.

- The purpose is to add a heading for organizational clarity.
- There is no intended change in regulatory effect.

**1501.1 Applicability**

DWR proposes to delete the sentence: “Except as otherwise provided for in this chapter, the provisions of this code shall be applicable to alternate water source system installation.”

- The purpose is to eliminate redundant and limiting language.
- This is necessary to streamline the code and to clarify the scope of activities related to alternate water source systems governed by this chapter.
- There is no intended change in regulatory effect.

**1501.1.1 Allowable Use of Alternate Water**

DWR proposes to adopt this section dealing with recycled water without amendment.

- The purpose of the adoption is to affirm DWR support for this section and to communicate that the Authority Having Jurisdiction (AHJ) can and may require the use of alternate water supplies.
- This is necessary for DWR to adopt existing code to exercise its authority over recycled water and to codify that alternate water sources can be used as approved.
- There is no intended change in regulatory effect.

**1501.2 (formerly 1613A.0(D)) System Design**

As a result of CAC review and consultation with HCD and CBSC, DWR proposes to adopt Section 1501.2 of the 2015 UPC dealing with system design without amendment. This language was adopted by CBSC but was inadvertently not printed in the 2016 CPC. These requirements have the same intended meaning as that found in Section 1613A.0 (D) of Chapter 16A. Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR agreed to use UPC language. The purpose is to bring forward standards for recycled water systems designers from Chapter 16A to Chapter 15.

- This is necessary to ensure that recycled water systems are properly and safely designed to protect public health.
- There is no intended change in regulatory effect.

### **1501.3 (formerly 1615A.0) Permit**

DWR proposes to adopt Section 1501.3 of the 2016 CPC dealing with recycled water with minor amendments.

DWR proposes to change "a" to "its" for clarity, and to correct the spelling of "premise" to "premises".

DWR proposes to add "Authority Having Jurisdiction" as previously specified in Section 1615A.0 of Chapter 16A and as it appears in the 2015 UPC model code.

DWR proposes to delete "Prior to commencing ... water systems." because this text is relocated into the pertinent sections dealing with recycled water (Section 1503.2) and graywater (Section 1504.2).

DWR proposes to add:

"No changes or connections shall be made to either the alternate water source system or the potable water system within a site containing an alternate water source system without approval by the Authority Having Jurisdiction."

to clarify that alterations to a potable water system could inadvertently affect the alternate water source system or cause cross-connections between systems.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to provide protection for potable water supply on the same premises as alternate water supplies.
- This is necessary to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

### **1501.4 Component identification.**

DWR proposes to adopt without amendment Section 1501.4 dealing with recycled water.

- The purpose of the adoption is to affirm DWR support for this section and to identify the manufacturer name of system components for the water user.
- It is necessary that the manufacturer be known for future maintenance, repair, and warranty information. This is necessary for DWR to adopt existing code to exercise its authority over recycled water.
- There is no intended change in regulatory effect.

### **1501.5 Maintenance and Inspection**

DWR proposes to adopt Section 1501.5 with amendments adding the Exception referencing the code dealing with recycled water in Section 1503.15; and substituting Authority Having Jurisdiction for Enforcing Agency.

- The purpose is to consolidate the recycled water provisions as much as possible and practical into Section 1503.
- This is necessary because recycled water standards are different and more protective than alternate water source standards and moving the standards to Section 1503.15 will enhance clarity in describing the standards.
- There is no intended change in regulatory effect.

### **1501.5.2 (formerly numbered 1501.5.3 of 2015 UPC only) Maintenance Responsibility**

DWR proposes to adopt this section of the 2015 UPC dealing with recycled water with an amendment (section has been renumbered to fit the sequence in the CPC). This section was not previously adopted into the CPC.

- The purpose of the adoption is to establish appropriate responsibility for maintenance of alternate water source systems, including recycled water.
- This is necessary to clearly identify who is responsible for future maintenance and repair work as required on the system. Also, DWR is adopting this to exercise its authority over recycled water.
- The proposed amendment constitutes a new requirement for recycled water supply systems.

### **1501.6 Operation and Maintenance Manual**

DWR proposes to adopt Section 1501.6 with amendments, which add requirements for recycled water supply systems and cross-reference applicable Chapter 15 sections (1503.2 and 1503.15).

- The purpose of the adoption is to apply the same standards for specified alternate water source systems including recycled water systems, and to point to the code section dealing with recycled water.
- The manual referred to in this section is necessary for the proper future operation, maintenance and repair work as required on the system to provide guidance to owners. The proposed amendment constitutes a new requirement for recycled water systems.

### **1501.7 Minimum Water Quality Requirements**

DWR proposes to adopt Section 1501.7 with clarifying amendments cross-referencing applicable recycled water system requirements in Section 1503.14. The water quality requirements for recycled water are established by the SWRCB, so this section does not create a new water quality standard.

- The purpose of the adoption of this section is to ensure that recycled water of appropriate water quality is used to protect public health and to reference appropriate standards as specified in Section 1503.14.
- This is necessary to inform users of recycled water of the regulatory standards for water quality to protect public health.
- There is no intended change in regulatory effect.

### **1501.8 Material Compatibility**

DWR proposes to adopt this section, which deals with alternate water sources, including recycled water, without amendment.

- The purpose of the adoption is to affirm DWR support for this reasonable practice that should be applicable to recycled water systems.
- This is necessary to ensure that proper materials are used to avoid system failure that could have public health consequences or discourage users from using recycled water.
- There is no intended change in regulatory effect.

### **1501.9 System Controls**

DWR proposes to adopt this section dealing with recycled water without amendment.

- The purpose of the adoption is to affirm DWR support for this reasonable practice and should be applicable to recycled water systems.
- This is necessary for maintaining the usability of the recycled water by preventing mercury contamination. Also, DWR is adopting this to exercise its authority over recycled water.
- There is no intended change in regulatory effect.

### **1501.10 Signage**

DWR proposes to create a new section titled Signage for organizational clarity. This new section provides a consolidated place in the Code directing the user to the appropriate sections governing recycled water and on-site treated nonpotable graywater signage requirements. Signage requirements for recycled water are being moved to Section 1503.12 to address unique requirements not applicable to other alternate water source systems. Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR corrected section references.

DWR proposes to reference the parallel code in Section 1503.12 dealing with recycled water signage.

- The purpose is to create a section heading to organize the topic's section subcategories and to provide a reference to the recycled water signage requirements: Section 1503.
- This is necessary for clarity and ease of use of the code. Also, the organizational restructuring of the CPC provides a place where the recycled water signage requirements can be referenced, as well as a place in Section 1503 where recycled water code section resides.
- There is no intended change in regulatory effect.

#### **1501.10.1 (formerly 1619A.0(A)) Commercial, Industrial, Institutional, and Residential Restroom Signs**

DWR proposes to adopt Section 1501.10.1 with amendments and renumber Section 1501.10 to 1501.10.1 as a subsection of Signage.

DWR proposes to delete references to recycled water in Section 1501.10.1 because the standards for recycled water are contained in proposed Section 1503.12.

- The purpose is to separate and consolidate the signage requirements for recycled water into Section 1503.12.
- This is necessary because recycled water signage standards are different from standards for other alternate water source systems and separating them into Section 1503 will improve clarity and ease of use of the code.
- There is no intended change in regulatory effect.

#### **1501.10.2 (formerly 1619A.0(B)) Equipment Room Signs**

DWR proposes to adopt Section 1501.10.2 with amendments and renumber Section 1501.10.1 to 1501.10.2 as a subsection of Signage.

DWR proposes to delete references to recycled water in Section 1501.10.2 because the standards for recycled

water are contained in proposed Section 1503.12.

- The purpose is to separate and consolidate the signage requirements for recycled water into Section 1503.12.
- This is necessary because recycled water signage standards are different from standards for other alternate water source systems and separating them into Section 1503 will improve clarity and ease of use of the code.
- There is no intended change in regulatory effect.

#### **1501.11 (formerly 1620A.0(A)) Inspection and Testing**

DWR proposes to adopt Section 1501.11 with an amendment adding the Exception referencing the code dealing with recycled water in Section 1503.13. There are different requirements for inspection and testing for recycled water than for other alternate water source systems.

- The purpose is to consolidate the recycled water standards as much as possible and practical into Section 1503.13.
- This is necessary because recycled water standards are different for recycled water from other alternate water sources and separating them into Section 1503 will improve clarity and ease of use of the code.
- There is no intended change in regulatory effect.

#### **1501.13 Abandonment**

DWR proposes to adopt this section of the 2016 CPC dealing with alternate water sources, including recycled water, without amendment.

- The purpose of the adoption is to affirm DWR support that this is a reasonable practice for recycled water systems.
- This is necessary to ensure proper abandonment of facilities to avoid safety or health risk. Also, DWR is adopting this to exercise its authority over recycled water.
- The proposed amendment constitutes a new requirement for recycled water systems.

##### **1501.13.1 General**

DWR proposes to adopt this section of the 2016 CPC dealing with alternate water sources, including recycled water, without amendment.

- The purpose of the adoption is to affirm DWR support that this is a reasonable practice for recycled water systems.
- This is necessary to ensure proper abandonment of facilities to avoid safety or health risk. Also, DWR is adopting this to exercise its authority over recycled water.
- The proposed amendment constitutes a new requirement for recycled water systems.

##### **1501.13.2 Underground Tank**

DWR proposes to adopt this section of the 2016 CPC dealing with alternate water sources, including recycled water, without amendment.

- The purpose of the adoption is to affirm DWR support that this is a reasonable practice for recycled water systems.
- This is necessary to ensure proper abandonment of facilities to avoid safety or health risk. Also, DWR is adopting this to exercise its authority over recycled water.
- The proposed amendment constitutes a new requirement for recycled water systems.

#### **1501.14 (formerly 1621A.0) Sizing**

DWR proposes to adopt this section of the 2016 CPC dealing with alternate water sources, including recycled water, without amendment.

- The purpose of the adoption is to affirm DWR support that this is a reasonable practice for recycled water systems.
- This is necessary for proper design of recycled water facilities. Also, DWR is adopting this to exercise its authority over recycled water.
- There is no intended change in regulatory effect.

#### **1502.0 Gray Water Systems**

This section title has no text associated with it and is shown here and in the Express Terms for context.



### **1502.3 (formerly 1613A.0(A)) Connections to Potable and Reclaimed (Recycled) Water Systems**

DWR proposes to adopt with amendments Section 1502.3 of Chapter 15 to incorporate the intent of Section 1613A.0(A) in Chapter 16A to protect the water quality of the water supply. The amendment is addressing the use of recycled water as makeup water for untreated gray water supply systems, which was not addressed in Chapter 16A. The section deals with the conditions necessary to allow potable water, recycled water, and other nonpotable water to be used as makeup water for an untreated graywater system. The proposed amendment would require an air gap for other sources of water to be used as makeup water to protect the treated recycled water supply from contamination from the untreated graywater system supply. Recycled water in accordance with this code is highly treated and regulated and constantly monitored. Untreated graywater systems do not have ongoing regulatory surveillance. The air gap requirement provides protection against cross-connection and thus, contamination and follows the more protective language of the 2015 UPC model code, Chapter 15, Section 1502.3.

The proposed amendment also provides a way to test for cross-connections in new systems by the temporary connection to potable water.

The language and proposed structure of this section with use of exceptions is carried over into Sections 1502.3, 1503.4, 1504.4, and 1602.4 to provide consistent and clear format and requirements.

The purpose of both exceptions is to prevent backflow of the untreated graywater into the higher quality water line. This is required by the SWRCB through Title 17 to prevent contamination of the potable water supply. During the initial test of the system, the potable water may be used to test integrity of the system before the graywater has been connected to system. However, if subsequent to the test the graywater enters the potable system while the potable water line is inadvertently still connected, the backflow preventer will prevent accidental cross contamination of the potable water. In the case of makeup water, the air gap will prevent contamination of the potable supply.

Following CAC recommendation for further study and in consultation with SWRCB, HCD and CBSC, DWR agreed to add the word "direct" to the phrase "no direct connection to potable water supply". DWR made a minor change to consistently use the phrase "recycled water supply system" in lieu of "Reclaimed (Recycled) Water Systems" and added the term "non-potable graywater" to Exception (1) to clarify the storage tank's water type. DWR also added a reference to Section 1501.11.2.2 in Exception (2) and deleted language in Exception (2) describing backflow prevention devices required. DWR proposes to add Subtitle "Exceptions" to clarify there are two exceptions.

- The purpose of Exception (1) is to mandate an air gap when augmenting a graywater system with higher quality waters, including recycled water.
- This is necessary to protect the quality of the makeup water.
- There is minor change in regulatory effect.
  
- The purpose of Exception (2) is to allow a temporary connection to a potable line for testing purposes prior to connection to an untreated graywater source system.
- This is necessary to test the system integrity prior to initial operation of a gray water source system.
- There is minor change in regulatory effect.

**4. DWR PROPOSES TO ADOPT THE FOLLOWING SECTIONS 1503 AND 1504 OF CHAPTER 15 OF THE CPC AS FOLLOWS:**

**CHAPTER 15  
§1503 and 1504  
ALTERNATIVE WATER SOURCES FOR NONPOTABLE APPLICATIONS**

**1503.0 Recycled Water Supply Systems for Buildings**

Following the original submittal of the Initial Express Terms to CBSC, DWR, after CAC review and consultation with HCD and CBSC, changed the title to: "Recycled Water Supply Systems "in order to use consistent terminology.

**1503.1 (formerly 1613A.0(A)) General**

DWR proposes to bring forward content from Chapter 16A, Section 1613A.0(A) to Chapter 15 Section 1503.1 with amendment for consistency. This section lists the scope of activities related to recycled water source systems governed by this chapter, as well as the allowed beneficial uses.

DWR proposes to add "receiving reclaimed (recycled) water from a water/wastewater utility".

- The purpose is to clarify that the source of recycled water is from a municipal facility rather than generated on-site.
- This is necessary to specify because the recycled water from a municipal water/wastewater facility is highly treated and constantly monitored with ongoing regulatory surveillance. This added treatment and surveillance improves the safety of, and therefore increases the allowed uses for, recycled water treated from a municipal facility.
- There is no intended change in regulatory effect.

DWR proposes to add language to clarify that standards applicable for alternative water systems in this chapter also apply to recycled water supply systems, unless stated otherwise.

- The purpose is to inform the code user that recycled water is covered under alternative water system code standards, unless stated otherwise in the code.
- This is necessary to inform recycled water users to pay attention to alternative water system code.
- There is no intended change in regulatory effect.

DWR proposes to add for clarity subparagraph designations to specify the location:

- (1) in the CCR of allowed recycled water uses.
- (2) where the permitted recycled water uses for individual facilities will be listed.

- The purpose is to clarify the source of regulatory information for recycled water application and uses: Title 22 and SWRCB's, or Regional Water Quality Control Board's, recycled water permit.
- This is necessary to inform recycled water users and others working on the system.
- There is no intended change in regulatory effect.

Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR reorganized language for clarity and added language to specify that Section 1503 applies to safely plumb buildings with both potable and recycled water.

**1503.1.1 (formerly 1613A.0(A) and 1615A.0) Toilet and Urinal Flushing**

DWR proposes to add Section 1503.1.1 to Chapter 15, capturing content from two sections in Chapter 16A Section 1615A.0 for allowable structures, and Section 1613A.0 (A) for allowable sanitary flushing.

This section also has text referencing the Water Code Section where the allowed uses are described.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, as well as to state that sanitary flushing is an allowed use. This section also lists the types of structures where recycled water use is allowed (indoors).
- This is necessary to streamline the code to group together recycled water standards, to state flushing is an allowed use, and to list allowable structure.
- There is no intended change in regulatory effect.

### **1503.2 (formerly 1615A.0) Permit**

DWR proposes to adopt with amendment Section 1503.2 of Chapter 15 to bring forward part of Section 1615A.0 in Chapter 16A regarding the need to obtain a permit.

DWR proposes to move language:

“Prior to commencing ... water systems”

from Section 1501.3 regarding the need to consult with various regulatory officials.

Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to consistently use the phrase “recycled water supply system”.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, as well as to clarify that a permit is required together with consultation with local officials, prior to working on a recycled water supply system.
- This is necessary to streamline the code to group together recycled water standards for clarity and ease of use, and to clarify the requirement of a permit and consultation prior to working on a system, ensure that authorities are informed and proper precautions are taken protecting the water supplies and thus public health.
- There is no intended change in regulatory effect.

### **1503.2.1 (formerly 1613A.0, 1613A.0(B), 1616A.0(A), 1616A.0(B)) Plumbing Plan Submission**

DWR proposes to adopt without amendment Section 1503.2.1 of Chapter 15. Note that this Section 1503.2.1 replaces with minor amendments the language in Chapter 16A Sections 1616A.0 and 1613A.0.

Section 1616A.0(A) for drawing plans

Section 1616A.0(B) for sufficient detail

Section 1613A.0(B) and 1616A.0(B) for plumbing plan submission.

- The purpose is to adopt standards in Chapter 15 which incorporate and thus replace those in Chapter 16A. The intent of this section is to have well designed plans prior to receiving a permit from the AHJ to perform work on a recycled water supply system.
- This is necessary to ensure public health is protected through a safe water supply system. Safety is maintained through a plan for recycled water plumbing work that is well designed and approved by the AHJ. Additionally, this section consolidates four sections of Chapter 16A streamlining the recycled water code for clarity and ease of use.
- There is no intended change in regulatory effect.

### **1503.3 (formerly 1613A.0(B)) System Changes**

DWR proposes to adopt without amendment Section 1503.3 of Chapter 15 of the 2016 CPC. Note that this Section 1503.3 replaces with minor amendments language in Chapter 16A Section 1613A.0(B).

- The purpose is to maintain control of the system integrity through the approval of plans by the AHJ.
- This is necessary because a user needs AHJ approval prior to connecting or altering a system. Then, while seeking approval, the AHJ is informed and can in turn ensure that the proper protocol is followed to protect the water supply.
- There is no intended change in regulatory effect.

### **1503.4 (formerly 1613A.0(A)) Connections to Potable or Recycled Water Supply Systems**

DWR proposes to adopt with amendments Section 1503.4 of Chapter 15 to bring forward the requirements in Section 1613A.0(A) in Chapter 16A to protect the water quality of the water supply. Section 1503.4 deals with the conditions necessary to allow potable water to be used as makeup water for a municipally treated recycled water supply system. It also deals with the conditions necessary to allow recycled water to be used as makeup water for other alternative water source systems. The proposed amendment would require an air gap for a higher quality water to be used as makeup water to protect the higher water quality of the supply from contamination from the lesser quality water supply. Recycled water, in accordance with this code, is highly treated and regulated and constantly monitored. The air gap requirement provides protection for the potable water supply when used as makeup water for a recycled water system. The air gap requirement provides protection for the recycled water supply when recycled water is used as makeup water for lower water quality systems. The language is found in the 2015 UPC model code, Chapter 15, Section 1503.4.

The proposed amendment also provides a way to test for cross-connections in new systems by the temporary connection to potable water.

The language and proposed structure of this section with use of exceptions is duplicated in Sections 1502.3, 1503.4, 1504.4, and 1602.4 to provide consistent and clear format and requirements.

The purpose of the three Exceptions is to prevent backflow of the lower quality water into the higher quality water line. This is required by the SWRCB in Title 17, CCR, to prevent contamination of the potable water supply. During the initial test of the system, the potable water is used to test the integrity of the system before the recycled water has been connected to system. However, if subsequent to the test the recycled water is connected while the potable water line is inadvertently still connected, the backflow preventer will prevent accidental cross contamination of the potable water.

In the case of potable makeup water to recycled water, the air gap will prevent contamination of the potable makeup water. The air gap will also prevent any contamination of the recycled water supply when it is used as makeup water to other alternate water supplies.

DWR proposes to add Subtitle "Exceptions" to clarify that there are three exceptions.

Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to use consistent terminology and changed the title to: "Connections to Potable or Recycled Water Supply Systems". Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR agreed to add the word "direct" to the phrase "no direct connection to potable water supply". DWR made a minor change to use consistent terminology: "recycled water supply system". DWR added a reference to Section 1503.13.2.2 in Exception (2). DWR deleted language in Exception (2) describing backflow prevention devices required.

**Exceptions:**

- The purpose of Exception (1) is to mandate an air gap when augmenting a recycled water system with potable water.
- This is necessary to protect the quality of the potable water supply for public health protection.
- There is no intended change in regulatory effect.
- The purpose of Exception (2) is to allow a temporary connection to a potable line for testing purposes.
- This is necessary to test the system integrity.
- There is no intended change in regulatory effect.
- The purpose of Exception (3) is to mandate an air gap when augmenting an alternate water system with recycled water.
- This is necessary to protect the quality of the recycled water supply for public health protection.
- The proposed amendment constitutes a new requirement for recycled water systems.

**1503.5 (formerly 1620A.0(B)(a)) Initial Cross-Connection Test**

DWR proposes to adopt with amendments Section 1503.5 of Chapter 15. These amendments include deleting references to recycled water in Section 1501.11.2 and adding references to Section 1503.13.2.2. DWR proposes minor edits for clarity.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, and to edit for grammar and accuracy
- This is necessary to provide proper cross-references due to organizational restructuring, to bring forward the testing protocol, as well as make minor edits.
- There is no intended change in regulatory effect.

**1503.6 Reclaimed (Recycled) Water System Materials**

DWR proposes to adopt without amendment this section of the 2016 CPC because it is a reasonable practice and should be applicable to recycled water systems.

- The purpose of the adoption is to affirm DWR support for this reasonable practice for recycled water systems.
- This is necessary for proper design of recycled water facilities. Also, DWR is adopting this to exercise its authority over recycled water.
- There is no intended change in regulatory effect.

**1503.7 (formerly 1617A.0 – 1617A.2) Reclaimed (Recycled) Water System Color and Marking Information**

DWR proposes to adopt with amendments Section 1503.7 of Chapter 15.

DWR proposes to add:

"All mechanical equipment, including control valves, appurtenant to reclaimed (recycled) water systems

shall be painted purple or composed of purple material matching Pantone color No. 512, 522C or equivalent.”

to provide clarity on proper marking of recycled water systems and components.

DWR proposes to add “and non-metallic” to explain that the non-metallic pipes can be marked with tape as well.

DWR proposes additional edits for clarity, and to remove an outdated cross-reference to section 601.3 as this section will no longer be applicable to recycled water. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to consistently use the phrase “recycled water supply system”.

- The purpose is to bring forward standards from existing color and marking requirements in Section 1617A.0 through 1617A.2 in Chapter 16A and 601.3 in Chapter 6, to edit for clarity, to consolidate recycled water codes into Section 1503, and to provide protection for potable water supply via proper marking.
- This is necessary to streamline the code and to ensure that recycled water regulations are because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source. Additionally, the methods to properly mark the appurtenances of the recycled water supply system have been augmented thereby facilitating proper marking.
- There is minor change in regulatory effect.

### **1503.8 Valves**

DWR proposes to adopt without amendment Section 1503.8 of Chapter 15. This section will serve as section heading for additional valve-related sections: Valve Seals, and Valve and Appurtenance Access Door Signs for clarity.

- The purpose of the section is to serve as a lead section into the valve-related sections from Chapter 16A.
- This is necessary to organize the text and to monitor for unauthorized alterations to the recycled water supply systems.
- There is no intended change in regulatory effect.

#### **1503.8.1 (formerly 1619A.0(E)) Valve Seals**

DWR proposes to bring forward Section 1619A.0 (E) in Chapter 16A to Section 1503.8.1 in Chapter 15.

Section 1503.8.1 is consistent with the language in Chapter 16A which deals with seals on the valves.

- The purpose is to bring forward standards from Section 1619A.0 (E) of Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503.
- This is necessary to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

#### **1503.8.2 (formerly 1619A.0(D)) Valve and Appurtenance Access Door Signs**

DWR proposes to bring forward Section 1619A.0 (D) in Chapter 16A to Section 1503.8.2 in Chapter 15.

Section 1619A.0 (D) in Chapter 16A deals with valve access door signs. It provides information on sign placement location, letter-size, and background color.

Section 1503.8.2 is consistent with the language in Section 1619A.0 (D) in Chapter 16A except the required size of the letters in signage is decreased from 1/2 inch to 3/8 inch to reasonably fit the required text within the prescribed sign size.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to consolidate recycled water codes into Section 1503, and to provide notification of the presence of recycled water supply system.
- This is necessary to streamline the code, to ensure that those accessing the water control valves are made aware of the recycled water supply system, and to provide for appropriate management for each water source.
- There is no intended change in regulatory effect.

#### **1503.9 (formerly 1618A.0(A)) Hose Bibbs**

DWR proposes to adopt Section 1503.9 of Chapter 15 of the UPC with amendments to bring forward Section 1618A.0(A) in Chapter 16A, and to adopt marking requirements of quick couplers, which was not addressed in Chapter 16A. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change of “Exceptions” to “Exception”.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate

recycled water codes into Section 1503, and to prevent unauthorized outdoor use of recycled water.

- This is necessary to provide public health protection resulting from unauthorized use of recycled water.
- There is minor change in regulatory effect.

DWR proposes to add an exception not in Section 1618.0(A). Hose bibbs are allowed at cemeteries based on the Health and Safety Code Sections 8117 and 8118.

- The purpose of the exception is to align the standards with current statutory requirements for cemeteries.
- This is necessary to clarify that hose bibbs are permitted by statute in cemeteries.
- There is no intended change in regulatory effect.

#### **1503.10 (formerly 1618A.0(B)) Required Appurtenances**

DWR proposes to bring forward with amendment, Section 1618A.0 (B) in Chapter 16A to Section 1503.10 of Chapter 15. DWR proposes an amendment to expand the scope from the building to the premises.

DWR proposes to delete "for deactivation or drainage" and add "testing" to match the Chapter 16A language.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to allow for cross connection testing of the building, as well as the building's premises
- This is necessary to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source. Additionally, it is necessary to include the building and its premises to do a proper cross connection control test.
- The proposed amendment constitutes a new requirement for recycled water systems.

#### **1503.11 (formerly 1618A.0(C)) Pipe Separation in Trenches**

DWR proposes to adopt Section 1503.11 of Chapter 15 of the UPC with amendment to bring forward Section 1618.0(C) in Chapter 16A. Section 1503.11 has additional requirements for separation of potable pipes from recycled water pipes in trenches, which is not addressed in Chapter 16A. While not previously adopted by DWR, the separation standards in Section 1503.11 between potable and recycled water pipes are recommended by SWRCB and are consistent with current procedures practiced by several agencies to protect potable water.

Additionally, Section 1618.0(C) has specific code citations absent in Section 1503.11 that specify requirements for the separation of recycled water pipes from sewer or drainage pipes.

DWR proposes to rename the title of this section to reflect its content.

Following CAC recommendation for further study, DWR added references to Sections 609.0 and 720.0 from Section 1618A.0(C) of Chapter 16A because they are still appropriate and are helpful to the code user.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15 and to adopt standards for separation of potable and recycled water pipes.
- This is necessary to streamline and correct the code and to ensure that recycled water regulations are grouped together for appropriate management. It also prevents cross contamination between potable, recycled, sewer, and other pipes in trenches.
- There is minor change in regulatory effect.

#### **1503.12 (formerly 1619A.0(A)) Signage**

DWR proposes to adopt with amendment Section 1503.12, Signage of Chapter 15 and to bring forward Section 1619A.0 (A) Signs in Chapter 16A. DWR proposes to rename this section Signage to be consistent with code in Section 1501.10 dealing with signage for alternative water supplies.

DWR proposes to add text cross-referencing various code sections dealing with recycled water signage.

- The purpose is to serve as a lead section heading to organize the topic's section subcategories for the recycled water signage requirements.
- This is necessary for clarity and ease of use of the code. Also, the organizational restructuring of the CPC provides a place where the recycled water signage requirements can be referenced.
- There is no intended change in regulatory effect.

##### **1503.12.1 (formerly 1619A.0(A)) Commercial, Industrial, Institutional, and Residential Restroom Signs**

DWR proposes to bring forward Section 1619A.0 (A) in Chapter 16A to Section 1503.12.1 in Chapter 15. The proposed language addresses signage in restrooms. Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR revised character height requirements and added reference to accessibility signage requirements in Chapters 11A and 11B in Part 2 of California Building Code.

Note: Similar language is found in Section 1501.10.1 for alternate water supplies, except recycled water.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to provide direction for signage requirements in public restrooms.
- This is necessary to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Additionally, signage in restrooms helps to alert the patrons of the presence of recycled water.
- There is no intended change in regulatory effect.

#### **1503.12.2 (formerly 1619A.0(C)) Tank-Type Toilets**

DWR proposes to bring forward Section 1619A.0 (C) in Chapter 16A to Section 1503.12.2 of Chapter 15. The proposed language addresses signage inside the water reservoir of tank type toilets to declare the presence of recycled water. Proposed code requires sign placement (inside the tank of toilets), sign text, and sign material.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to caution against drinking water from the reservoir
- This is necessary to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

#### **1503.12.3 (formerly 1619A.0(B)) Equipment Room Signs**

DWR proposes to add Section 1503.12.3 to Chapter 15 and to bring forward Section 1619A.0 (B) in Chapter 16A. The proposed language addresses signage inside equipment rooms which warn of the presence of recycled water for those working on the plumbing. Proposed code indicates sign placement, sign text, and letter size.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to provide direction for signage requirements.
- This is necessary to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

#### **1503.12.4 Outdoor Signs**

Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR withdraws its amendment dealing with outdoor signage because these provisions are found in Title 22 Section 60310(g).

#### **1503.13 (formerly 1620A.0(A)) Inspection and Testing**

DWR proposes to adopt with amendment Section 1503.13 in Chapter 15 to bring forward Section 1620A.0(A) and 1620A.0(B)(2) in Chapter 16A.

Proposed language is from the 2015 UPC Section 1503.13 with edits to references of appropriate sections for testing instruction. The authority for a recycled water purveyor or other designated appointee to substitute for the Authority Having Jurisdiction is incorporated from Section 1620A.0(B)(2) in Chapter 16A. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to consistently use the phrase, "recycled water supply system".

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to consolidate recycled water codes into Section 1503, and to provide direction to test and to inspect recycled water supply systems.
- This is necessary to have a consistent inspection and testing protocol, to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

#### **1503.13.1 (formerly 1620A.0(A) and 1620A.0(B)) Supply System Inspection and Test**

DWR proposes to add Section 1503.13.1 to Chapter 15 to bring forward Section 1620A.0 (A) and 1620A.0 (B) in Chapter 16A. DWR wants to protect health and safety by maintaining clear directives in this section. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to consistently use the phrase

“recycled water supply system”.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to consolidate recycled water codes into Section 1503, and to provide continued direction on inspection and testing.
- This is necessary to have a consistent inspection and testing protocol, to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

### **1503.13.2 (formerly 1620A.0(B)(2)) Cross-Connection Inspection and Testing**

DWR proposes to bring forward Section 1620A.0 (B)(2) in Chapter 16A to Section 1503.13.2 of Chapter 15. This section is consistent with Title 22 requirements related to testing and inspection. Chapter 16A contains criteria for determining that there is a material reason to believe that a system has been compromised. The requirement to use certification by the California-Nevada section of the American Water Works Association, or an organization with equivalent certification requirements, is taken from Title 22 section 60316(a). The reason is to keep all cross-connection testing requirements together in one location. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to use consistently use the phrase “recycled water supply system”.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to consolidate recycled water codes into Section 1503, and to provide direction on inspection and testing.
- This is necessary to have a consistent inspection and testing protocol, to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

### **1503.13.2.1 (formerly 1620A.0(B)(1)) Visual System Inspection**

DWR proposes to bring forward Section 1620A.0 (B)(1) in Chapter 16A to Section 1503.13.2.1 of Chapter 15. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to the capitalization of “cross-connection test” in paragraph (4).

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to consolidate recycled water codes into Section 1503, and to provide direction to test and to inspect recycled water supply systems.
- This is necessary to have a consistent inspection and testing protocol to guard against cross-connections and to protect public health, to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

### **1503.13.2.2 (formerly 1620A.0(B)(2)) Cross-Connection Test**

DWR proposes to bring forward Section 1620A.0 (B)(2) in Chapter 16A to Section 1503.13.2.2 of Chapter 15 to provide detailed instruction for a cross connection test. This new section is consistent with Chapter 16A and Section 1501.11.2.2. The allowance for alternate testing procedures where shutting off water is not practical is incorporated from 1620A.0(B)(2). Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR changed item 6 from “will be required” to “shall be required”.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to provide procedures to conduct a cross connection test of the recycled water supply system.
- This is necessary to have a consistent inspection and testing protocol, to streamline the code and to ensure that recycled water regulations are grouped together because such regulations are different from those governing other alternate water sources. Separating recycled water standards from other alternate water source standards provides for appropriate management for each water source.
- There is no intended change in regulatory effect.

### **1503.13.2.3 (formerly 1620A.0(B)(3)) Discovery of Cross-Connection**

DWR proposes to bring forward Section 1620A.0 (B)(3) in Chapter 16A to Section 1503.13.2.3 of Chapter 15. DWR proposes to add a procedural step at the beginning of this section to require notification of the Authority Having Jurisdiction upon discovery of a cross connection. This step allows the Authority to be notified and schedule a cross-connection test, while allowing others to shut down the water system preventing further cross-connection flow. This



is consistent with Chapter 16A language. Current language in 1501.11.2.3 requires the Authority to be present for all the steps and may cause delays in shutting down the system.

- The purpose is to bring forward standards from Chapter 16A to Chapter 15, to edit for clarity, to consolidate recycled water codes into Section 1503, and to provide procedures to follow when a cross connection is discovered.
- This is necessary to have a proper procedure to follow when a cross connection is discovered.
- There is minor change in regulatory effect.

#### **1503.13.2.4 (formerly 1620A.0(B)) Periodic Inspection**

DWR proposes to add Section 1503.13.2.4 to Chapter 15 to bring forward a portion of Section 1620A.0(B) in Chapter 16A.

The section was renamed “Periodic Inspection” to acknowledge different intervals of inspection and testing. Visual inspections every year and cross-connection tests every 4 years in buildings are currently required in Section 1620A.0(B) (b) and (c), and in the California Code of Regulations, Title 22, Section 60316(a). The purpose of repeating the Title 22 requirement in this section is for clarity for code users by keeping all periodic inspection requirements together in one location.

Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR changed references to “Authority Having Jurisdiction” to “recycled water supplier or its designee”, and removed requirements for landscape irrigation inspection and testing.

- The purpose is to provide the frequency of monitoring systems to detect cross connections or improper use of recycled water.
- This is necessary to protect the occupants, as well as the public.
- There is no intended change in regulatory effect.

#### **1503.14 (formerly 1614A.0) Minimum Water Quality Requirements for Reclaimed (Recycled) Water**

DWR proposes to bring forward with amendments Section 1614A.0 in Chapter 16A to Section 1503.14 of Chapter 15. The proposed language includes edits to improve clarity and to define minimum water quality. Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR designated responsibility for supplying acceptable recycled water to the recycled water supplier.

- The purpose is to provide minimum standards for the quality of recycled water.
- This is necessary to protect public health.
- There is no intended change in regulatory effect.

#### **1503.15 Maintenance and Inspection**

DWR proposes to add Section 1503.15 to Chapter 15 to be consistent with Sections 1501.5 and 1501.5.1 in Chapter 15 of the 2015 UPC, as well as from Sections 1501.5 and 1501.5.1 in Chapter 15 of the 2016 CPC. The new text replaces “Enforcing Agency” with “Authority Having Jurisdiction”. Additional proposed language deals with recycled water supply systems to improve clarity and to define maintenance protocols.

The text relating to recycled water supply systems in Section 1501.5 for all alternative water sources has been relocated to Section 1503 for clarity because requirements for recycled water supply systems differ from other alternative sources. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to consistently use the phrase “recycled water supply system”.

- The purpose is to provide minimum standards for the inspection and maintenance of recycled water facilities.
- This is necessary to ensure the proper operation.
- The proposed amendment constitutes a new requirement for recycled water systems.

##### **1503.15.1 Method and Frequency**

DWR proposes to add Section 1503.15.1 to Chapter 15 to be consistent with Sections 1501.5 and 1501.5.1 in Chapter 15 of the 2015 UPC. The proposed language deals with recycled water supply systems to improve clarity and to define minimum maintenance frequency. Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to consistently use the phrase “recycled water supply system”.

- The purpose is to provide minimum standards for the method and frequency to inspect and maintain recycled water facilities on the premises.
- This is necessary to ensure the proper maintenance and operation of recycled water systems.
- The proposed amendment constitutes a new requirement for recycled water systems.

##### **1503.15.2 Maintenance Log**

Following CAC recommendation for further study and in consultation with HCD and CBSC, DWR has withdrawn the proposed adoption of this section related to Maintenance Logs because of concerns raised about the practicality of property owners maintaining maintenance logs. At this time, some recycled water purveyors have indicated they maintain records of onsite inspections that may serve the purpose of the proposed Maintenance Log. The proposed language was intended to define record keeping for the recycled water system, to guard against improper alteration of facilities, and to facilitate periodic visual inspections to determine if cross-connections or other improper plumbing changes had occurred.

#### **TABLE 1503.15**

DWR proposes to add Table 1503.15 to Chapter 15 to be consistent with Table 1501.5 in Chapter 15 of the 2015 UPC. The proposed language specifies the frequency of testing, inspection, and maintenance with recycled water supply systems to improve clarity and to define record keeping for the recycled water system.

- The purpose is to provide minimum standards for the inspection and maintenance of recycled water facilities.
- This is necessary to ensure the proper operation.
- The proposed amendment constitutes a new requirement for recycled water systems.

#### **1504.0 On-Site Treated Nonpotable Water Systems**

The title is shown here for context. There is no text in this section.

- The purpose is to show the heading for organizational clarity.
- There is no intended change in regulatory effect.

#### **1504.4 (parallels 1613A.0(A) language) Connections to Potable or Recycled Water Supply Systems**

DWR proposes to adopt with amendments Section 1504.4 of Chapter 15 to incorporate the intent of Section 1613A.0(A) in Chapter 16A to protect the quality of the water supply. The amendment is addressing the use of recycled water as makeup water for on-site treated gray water supply systems, which was not addressed in Chapter 16A. The section deals with the conditions necessary to allow potable water, and recycled water to be used as makeup water for an on-site treated nonpotable gray water system. The proposed amendment would require an air gap for these sources of water to be used as makeup water to protect the potable and treated recycled water supply from contamination from the on-site treated nonpotable gray water system supply. Recycled water in accordance with this code is highly treated and regulated and constantly monitored. On-site treated nonpotable gray water systems do not have ongoing regulatory surveillance. The air gap requirement provides protection and follows the language found in the 2015 UPC model code, Chapter 15, Section 1504.4.

The proposed amendment also provides a way to test for cross-connections in new systems by the temporary connection to potable water.

The language and proposed structure of this section with use of exceptions, is carried over into Sections 1502.3, 1503.4, 1504.4, and 1602.4 to provide consistent and clear format and requirements.

The purpose of both Exceptions is to prevent backflow of the on-site treated nonpotable gray water into the higher quality water line. This is required by the SWRCB in Title 17 of CCR to prevent contamination of the potable water supply. During the initial test of the system, the potable water is used to test integrity of the system before the on-site treated nonpotable gray water has been connected to system. However, if subsequent to the test the on-site treated nonpotable gray water enters the nonpotable system while the potable water line is inadvertently still connected, the backflow preventer will prevent accidental cross contamination of the potable water. In the case of makeup water, the air gap will prevent contamination of the potable supply.

Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to use consistent terminology and changed the title to: "Connections to Potable or Recycled Water Supply Systems". Following CAC recommendation for further study and in consultation with SWRCB, HCD and CBSC, DWR agreed to add the word "direct" to the phrase "no direct connection to potable water supply". DWR made a minor change to consistently use the phrase, "recycled water supply system". DWR added a reference to Section 1501.11.2.2 in Exception (2). DWR deleted language in Exception (2) describing backflow prevention devices required.

DWR proposes to add the Subtitle "Exception" to clarify there are two exceptions.

**Exceptions:**

- The purpose of Exception (1) is mandate an air gap when augmenting an on-site treated nonpotable gray water system with higher quality waters, including recycled water.
- This is necessary to protect the quality of the makeup water.
- There is minor change in regulatory effect.
  
- The purpose of Exception (2) is to allow a temporary connection to a potable line for testing purposes prior to connection to an on-site treated nonpotable gray water source system.
- This is necessary to test the system integrity prior to initial operation of an on-site treated nonpotable gray water source system. .
- There is minor change in regulatory effect.

**5. DWR PROPOSES TO ADOPT THE FOLLOWING SECTION OF CHAPTER 16 OF THE CCP AS FOLLOWS:**

**CHAPTER 16  
NONPOTABLE RAINWATER CATCHMENT SYSTEMS**

**1602.4 (parallels 1613A.0(A) language) Connections to Potable or Recycled Water Supply Systems**

DWR proposes to adopt with amendment Section 1602.4 of Chapter 16 to incorporate the intent of Section 1613A.0(A) in Chapter 16A to protect the quality of the water supply. The amendment is addressing the use of recycled water as makeup water for untreated nonpotable rainwater catchment systems, which was not addressed in Chapter 16A. The section deals with the conditions necessary to allow potable water and recycled water to be used as makeup water for an untreated rainwater system. The proposed amendment would require an air gap for these sources of water to be used as makeup water to protect the potable and treated recycled water supply from contamination from the untreated rainwater system supply. Recycled water in accordance with this code is highly treated and regulated and constantly monitored. Untreated rainwater systems do not have ongoing regulatory surveillance. The air gap requirement provides protection and follows the 2015 UPC model code, Chapter 16, Section 1602.4.

The proposed amendment also provides a way to test for cross-connections in new systems by the temporary connection to potable water.

The language and proposed structure of this section with use of exceptions is carried over into Sections 1502.3, 1503.4, 1504.4, and 1602.4 to provide consistent and clear format and requirements.

The purpose of both Exceptions is to prevent backflow of the untreated rainwater into the higher quality water line. This is required by the SWRCB in Title 17, CCR to prevent contamination of the potable water supply. During the initial test of the system, the potable water is used to test integrity of the system before the rainwater has been connected to system. However, if subsequent to the test, the rainwater enters the potable system while the potable water line is inadvertently still connected, the backflow preventer will prevent accidental cross contamination of the potable water. In the case of makeup water, the air gap will prevent contamination of the potable supply.

Following the original submittal of the Initial Express Terms to CBSC, DWR made a minor change to use consistent terminology and changed the title to: "Connections to Potable or Recycled Water Supply Systems". Following CAC recommendation for further study and in consultation with SWRCB, HCD and CBSC, DWR agreed to add the word "direct" to the phrase "no direct connection to potable water supply". DWR made a minor change to consistently use the phrase, "recycled water supply system". DWR deleted language in Exception (2) describing backflow prevention devices required.

DWR proposes to add the Subtitle "Exceptions" to clarify there are two exceptions.

- The purpose of Exception (1) is mandate an air gap when augmenting a rainwater system with higher quality waters, including recycled water.
- This is necessary to protect the quality of the makeup water.
- There is minor change in regulatory effect.
  
- The purpose of Exception (2) is to allow a temporary connection to a potable line for testing purposes prior to connection to an untreated rainwater source system.
- This is necessary to test the system integrity prior to initial operation of a rainwater source system.
- There is minor change in regulatory effect.

**6. DWR PROPOSES TO STRIKE CHAPTER 16A, PART II OF THE CPC TO AVOID CONFLICT OR DUPLICATION WITH THE PROPOSED ADOPTIONS TO THE CPC DESCRIBED IN THIS DOCUMENT.**

DWR proposes to strike this chapter.

- The purpose is to delete this chapter after its provisions have been moved to Chapter 15.
- This is necessary because after adoption of the amendments in items 1 through 5 of DWR's Express Terms, Chapter 16A, Part II will no longer be necessary.
- There is no intended change in regulatory effect.

**TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

DWR proposes to update the 2016 CPC as part of its responsibility under Water Code Section 13557. Primarily, the proposed amendments of the Plumbing Code migrate existing standards on how to design, construct, maintain, and test a building plumbed with both potable and recycled water from Chapter 16A to Chapter 15 to accommodate a reorganization of the UPC model code and the CPC. Pursuant to AB 2282 (2014) CBSC and HCD are also proposing amendments to the CPC regarding recycled water. DWR, CBSC, and HCD have been coordinating efforts to draft Express Terms for this code cycle. During the code pre-cycle period before submittal of proposed amendments to CBSC, the three agencies have been jointly sharing a public participation process and have been cooperating to attempt to harmonize and co-adopt proposed code revisions. The documents relied upon for these amendments are the existing regulations in Chapter 16A and written comments submitted by stakeholders. The stakeholder comments are posted on the CBSC website.

**STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:**

California's building standards codes have historically been a mix of performance and prescriptive provisions and reference standards. However, the installation of recycled water supply systems references existing prescriptive standards as specified in the California Plumbing Code, which are consistent with the recycled water use criteria in Title 22 of the California Code of Regulations. CBSC is statutorily required to adopt by reference model building codes, which are the basis of California building codes, which contain prescriptive standards. Prescriptive standards provide the following: explicit guidance for certain mandated requirements; consistent application and enforcement of building standards while also establishing clear design parameters; and ensure compliance with minimum health, safety, and welfare standards for owners, occupants, and guests. Performance standards are permitted by state law; however, they must be demonstrated to the satisfaction of the proper enforcing agency.

**CONSIDERATION OF REASONABLE ALTERNATIVES**

Two alternatives were evaluated in addition to the proposed amendments: (1) Keep existing regulations in Plumbing Code Chapter 16A, Part II without update. (2) Move Plumbing Code Chapter 16A, Part II content to Ch. 15 to conform to current Plumbing Code organization without update or effective integration for ease of use. DWR has determined that no reasonable alternative considered by DWR or that has otherwise been identified and brought to the attention of DWR would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

**REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

No alternatives were identified to lessen the adverse impact on small business. With minor exceptions the proposed amendments constitute a migration of existing regulations from Chapter 16A, Part II of the CPC to Chapter 15, with edits to improve clarity and harmonize with the current organization of the CPC. Elements of this proposal that are new to the code or are made more stringent are very minor and have been thoroughly vetted through stakeholder outreach and have been justified to implement the statutory mandate contained within Water Code Section 13557, that is, to provide design standards to safely plumb buildings with both potable and recycled water systems.

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

DWR has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states.

**ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The DWR has assessed whether or not and to what extent this proposal will affect the following:

☐ The creation or elimination of jobs within the State of California.

The proposed amendments will not create or eliminate jobs.

☐ The creation of new businesses or the elimination of existing businesses within the State of California.

The proposed amendments will not create or eliminate businesses.

☐ The expansion of businesses currently doing business with the State of California.

The proposed amendments will not affect the expansion of businesses currently doing business with the State of California. The CPC as currently in effect and as changed by the proposed amendments facilitates the use of recycled water, and thereby could allow business to expand in areas that are constrained by water availability.

- ☐ The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.

The proposed amendments will update and improve California Plumbing Code standards for the safe use of recycled water in buildings and surrounding landscape with both potable and recycled water.

**ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS**

These regulations will likely result in the following:

- No increased cost of compliance for those regulations that make technical, nonsubstantive or clarifying changes and insignificant costs associated with minor changes intended to improve public health and worker and residence protection.
- State of California will benefit from potable water savings. Use of recycled water will increase local water supply and reliability during shortages. Building owners may save operating costs because of reduced water costs. Local water districts may save costs of increasing water supply from other sources. Public health is protected by safe use of recycled water.
- Ensure the protection of public health and safety, worker safety and the environment.
- Promotes the general welfare of California residents.

**DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

There are no comparable federal regulations.